UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/115,764	07/15/98	REASONER M	65.748-449

PM82/1221

HAROLD W MILTON JR
HOWARD & HOWARD
1400 NORTH WOODWARD AVENUE
SUITE 101
BLOOMFIELD HILLS MI 48304-2856

EXAMINER	
LUONG, V	
ART UNIT	**PAPER NUMBER**
3682	15

DATE MAILED: 12/21/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/115,764	REASONER
Examiner	**Group Art Unit**
Vinh Luong	3682

☒ Responsive to communication(s) filed on *11/26/99*.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *4-40* is/are pending in the application.

Of the above, claim(s) *30-36* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *4, 5, 17-21, 23-28, and 37-40* is/are rejected.

☒ Claim(s) *6-16, 22, and 29* is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on *7/15/98* is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *13*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

Vinh T. Luong
Primary Examiner

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. The Amendment filed on June 7, 1999 (Paper No. 5) has been entered.

2. The Amendment and the First Supplemental Reissue Declaration filed on September 20, 1999, and the Supplemental Amendment filed on November 26, 1999 have been entered.

3. The First Supplemental Reissue Declaration filed on June 7, 1999 and July 13, 1999 have been disapproved since these Declarations were not signed and dated.

4 The First Supplemental Reissue Declaration filed on September 20, 1999 has been approved.

5. The patent sought to be reissued by this application is involved in litigation. Any documents and/or materials which would be material to the patentability of this reissue application are required to be made of record in reply to this action.

Due to the related litigation status of this application, EXTENSIONS OF TIME UNDER THE PROVISIONS OF 37 CFR 1.136(a) WILL NOT BE PERMITTED DURING THE PROSECUTION OF THIS APPLICATION.

6. Applicant is reminded of the continuing obligation under 37 CFR 1.56 to timely apprise the Office of any litigation information, or other prior or concurrent proceeding, involving Patent No. 5,653,148, which is material to patentability of the claims under consideration in this reissue application. This obligation rests with each individual associated with the filing and prosecution of this application for reissue. See MPEP §§ 1404, 1442.01 and 1442.04.

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features such as: (a) the overall length of the first and second conduit sections, and the shortening of the overall length of the first and

second conduit sections in claims 4, 17-20, 27 and 37; (b) the *shortest* overall length of the conduit in claims 15 and 39; and (c) the locking member 19 that abuts with the spring 22 in claim 27 must be shown, *or the features canceled from the claims. No new matter should be entered.*

Note that Figs. 1, 3 and 4 merely show portions of the first and second conduit sections 14 and 16, not their overall length. The shortening and the shortest overall lengths of the conduit sections are required to be shown in accordance with 37 C.F.R. 1.84(h), *or the features canceled from the claims.* In addition, Figs. 3, 4 and 6 plainly show that the locking member 19 is not abutted with the spring 22. To the contrary, the spring 22 is merely abutted the retainer 26. None of the figures show the claimed feature in claim 27.

8. Newly submitted claims 30-36 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the originally presented invention I is drawn to a motion transmitting remote control assembly, meanwhile, new claims 30-36 are drawn to an invention II, i.e., a method for adjusting the length of a motion transmitting remote control assembly. Inventions II and I are distinct from each other because inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. MPEP § 806.05(e). In this case, the process as claimed can be practiced by hand. Alternatively, the process as claimed can be practiced by another materially different apparatus such as the apparatus of Adams et al. (U.S. Patent No. 5,119,689. See claim 11). On the other hand, the apparatus as claimed can

also be used to practice another and materially different process such as the process for limiting the force applied by a throttle cable to an engine throttle. See, e.g., U.S. Patent No. 5,339,783 issued to Teichert.

Since applicant has received an action on the merits for the originally presented invention I, this invention I has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 30-36 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

9. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 27 claims that "wherein said locking member (19) defines an abutment that reacts with said spring (22) during assembly of said male member (18) into said female member (20) such that said adjustment components (28, 20) are biased together to shorten the overall length of said conduit sections (14, 16)."

However, Figs. 3, 4 and 6 plainly show that the locking member 19 is not abutted with the spring 22. To the contrary, the spring 22 is merely abutted the retainer 26. None of the figures show the claimed feature in claim 27. It is unclear as to how applicant makes or uses the locking member 19 such that the locking member abuts and reacts with the spring 22 *during assembly* of the male

member 18 into the female member 20 such that the adjustment components 28, 20 are biased together to shorten the length of the conduit sections14, 16 as claimed.

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 17, 27 and 37-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is indefinite since it depends on canceled claim 1.

The recitation such as "wherein said locking member (19) defines an abutment that reacts with said spring (22)..." in claim 27 is imprecise since the drawings such as Figs. 3, 4 and 6 plainly show that the locking member 19 is not abutted with the spring 22. To the contrary, the spring 22 is merely abutted the retainer 26.

No antecedent basis is seen for the term such as "said members" in line 11 of claim 37.

12. Claims 4, 20, 21, and claim 17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Teichert (U.S. Patent No. 5,339,783).

Regarding claim 4, Teichert teaches a remote control assembly comprising:

first and second conduit sections 36 and 58 (Fig. 3);

a flexible motion transmitting core element 12 movably supported in the sections 36 and 58;

adjustment components 40 and 42 interconnecting the first and second sections 36 and 58 and in telescoping relationship with each other for adjusting the overall length of the sections 36 and 58 wherein one of the adjustment components is a female member 42 and the other of the adjustment component is a male member 40 slidably disposed in the female 42;

a coil spring 38 supported on the male member 40 and interacting between the members 40 and 42 to bias the components 40 and 42 together to shorten the overall length of the sections 36 and 58;

a retainer (a protruding flange) 52 for retaining the spring 38 (i.e., as a seat for the spring 38. *Ibid.*, column 4, line 49 *et seq.*) in compression on one of the members 40 and 42, the members 40 and 42 including an abutment 46 for reacting with the spring 38 in place of the retainer 52 to bias the members 40 and 42 together in the direction to shorten the overall length of the conduit sections 36 and 58 as seen in the Exhibit I attached.

Claim 4 is anticipated by Teichert. On the one hand, Teichert teaches the shortening of the overall length of the conduit sections as claimed. On the other hand, it is well settled that the functional limitations of a claim may not be given patentable weight where those limitations are inherent in a prior art reference. *In re Schreiber*, 44 U.S.P.Q.2d 1429 (CAFC 1997).

Regarding claim 17, as the spring 38 is compressed axially (Fig. 2B), the first conduit 36 is pulled and the second conduit 58 (i.e., the fitting 54) moves away, consequently, the overall length of the conduit sections 36 and 58 are inherently lengthened. See lines 18-30 of column 7. Further, as the spring 38 is expanded axially (Fig. 2A), the first conduit 36 is retracted backwardly and the

second conduit 58 (i.e., the fitting 54) moves forwardly until the fitting 54 is stopped by the pivot coupling 22, consequently, the overall length of the conduit sections 36 and 58 are inherently shortened. See lines 47-53 of column 7 and the Exhibit I.

Regarding claim 20, Teichert teaches a remote control assembly comprising:

first and second conduit sections 36 and 58 (Fig. 3);

a flexible motion transmitting core element 12 movably supported in the sections 36 and 58;

adjustment components 40 and 42 interconnecting the first and second sections 36 and 58 and in telescoping relationship with each other for adjusting the overall length of the sections 36 and 58 wherein one of the adjustment components is a female member 42 and the other of the adjustment component is a male member 40 slidably disposed in the female 42;

a coil spring 38 supported on the male member 40 and interacting between the members 40 and 42 to bias the components 40 and 42 together to shorten the overall length of the sections 36 and 58.

Regarding claim 21, see a retainer (a protruding flange) 52 disposed on one of the adjustment components 40 and 42 for retaining the spring 38 (i.e., as a seat for the spring 38. *Ibid.*, column 4, line 49 *et seq.*) in compression.

13. Claims 4, 5, 18-21, 23-26, and claims 17 and 27, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Glover et al. (U.S. Patent No. 4,598,809 cited by applicant).

Regarding claims 4 and 17, Glover teaches a remote control assembly comprising:

first and second conduit sections 7 and 9;

a flexible motion transmitting core element 3 movably supported in the conduit sections 7 and 9;

adjustment components 5 and 20 interconnecting the first and second conduit sections 7 and 9 and in telescoping relationship with each other for adjusting the overall length of the sections 7 and 9 wherein one of the adjustment components is a female member 5 and the other of the adjustment component is a male member 20 slidably disposed in the female 5;

a coil spring 35 supported on the male member 30 and interacting between the members 5 and 20 to bias the members 5 and 20 together to shorten the overall length of the sections 7 and 9 as seen in Figs. 3 and 4 (*ibid.*, column 4, line 16 *et seq.*); and

a retainer 36 for retaining the spring 35 in compression on one of the members 5 and 20, the members 5 and 20 including an abutment 30, 31 for reacting with the spring 35 in place of the retainer 36 to bias the members 5 and 20 together in the direction to shorten the overall length of the conduit sections 7 and 9.

Claims 4 and 17 are anticipated by Glover. On the one hand, as the spring 35 is expanded axially as seen in Fig. 3, the components 5 and 20 are biased together to shorten the length of the first conduit 7, consequently, the overall length of the first and second conduit sections 7 and 9 are shortened as explicitly described in 13-33 of column 4. It is well settled that the functional limitations of a claim may not be given patentable weight where those limitations are inherent in a prior art reference. *In re Schreiber*, *supra*.

Regarding claim 5, the male member 20 includes adjustment teeth 21 there along, and a locking member 30, 31 supported by the female member 5 for engaging the teeth 21 in a locked position (Fig. 3) to prevent relative telescoping movement, the abutment 31 being presented by the locking member 30, 31.

Regarding claim 18, Glover teaches a remote control assembly comprising:

first and second conduit sections 7 and 9;

a flexible motion transmitting core element 3 movably supported in the sections 7 and 9;

adjustment components 5 and 20 interconnecting the sections 7 and 9 and in telescoping relationship with each other for adjusting the overall length of the sections 7 and 9; wherein one (20) of the adjustment components 20 and 5 includes adjustment teeth 21 and the other (5) of the adjustment components supports a locking member 30, 31 that selectively engages the teeth 21; and

a coil spring 35 interacting between the components 5 and 20 to bias the components 5 and 20 together to shorten the overall length of the sections 7 and 9 as seen in Figs. 3 and 4. *Ibid.*, column 4, line 16 *et seq*.

Regarding claim 19, Glover teaches a remote control assembly comprising:

first and second conduit sections 7 and 9;

a flexible motion transmitting core element 3 movably supported in the sections 7 and 9;

adjustment components 5 and 20 interconnecting the sections 7 and 9 and in telescoping relationship with each other for adjusting the overall length of the sections 7 and 9;

a coil spring 35 interacting between the components 5 and 20 to bias the components 5 and 20 together to shorten the overall length of the sections 7 and 9; and

a collar 37 (Fig. 3) supported on one (20) of the adjustment components 5 and 20 for reacting axially between the one of the components and the spring 35.

Regarding claim 20, Glover teaches a remote control assembly comprising:

first and second conduit sections 7 and 9;

a flexible motion transmitting core element 3 movably supported in the conduit sections 7 and 9;

adjustment components 5 and 20 interconnecting the first and second conduit sections 7 and 9 and in telescoping relationship with each other for adjusting the overall length of the sections 7 and 9 wherein one of the adjustment components is a female member 5 and the other of the adjustment component is a male member 20 slidably disposed in the female 5; and

a coil spring 35 supported on the male member 20 and interacting between the members 5 and 20 to bias the members 5 and 20 together to shorten the overall length of the sections 7 and 9 as seen in Figs. 3 and 4 (*ibid.*, column 4, line 16 *et seq.*).

Regarding claim 21, see a retainer 36 disposed on one of the adjustment components 5 and 20 for retaining the spring 35 in compression.

Regarding claim 23, see a locking member 30, 31supported by the female member 5 and movable between a locked position (Fig. 23) to prevent relative telescoping movement and an unlocked position (Fig. 4) to allow relative telescoping movement.

Regarding claim 24, the male member 20 includes adjustment teeth 21, and the locking member 30, 31 includes locking teeth 32 for engaging the adjustment teeth 21 when the locking member 30, 31 is moved to the locked position (Fig. 5).

Regarding claim 25, the locking member 30, 31 includes at least one detent 33 (i.e., outer peripheral surfaces 33 of the collet member 31. Ibid., line 56 et seq., column 3), and the female member 5 includes at least one recess 29 for receiving the detent 33 to hold the locking member 30, 31 in the unlocked position (Fig. 3).

Regarding claim 26, the female member 5 includes at least one catch 28 for engaging and retaining the detent 33 when the locking member 30, 31 is moved into the locked position. *Ibid*, Fig. 3, line 60 et seq., column 2.

Regarding claim 27, the locking member 30, 31 defines an *indirect* abutment that reacts with the spring 35 in the same manner as applicant's locking member. Moreover, note that the recitation regarding the process of assembly is not accorded patentable weight in the product or apparatus claims. *Exparte Masham*, 2 U.S.P.Q.2d 1647 (Bd. Pat. App. & Inter. 1987) and M.P.E.P. 2113 and 2114.

14. Claims 37-40, as best understood, and claims 20 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al. (U.S. Patent No. 5,119,689 cited by applicant).

Regarding claim 37, Adams teaches a remote control assembly comprising:

first and second conduit sections (*i.e.*, the Bowden cable sheath. *Ibid.*, line 63 et seq., column 2. See the Exhibit II attached);

a flexible motion transmitting core element (see Exhibit II) movably supported in the conduit sections;

adjustment components 14 and 21, 6 interconnecting the first and second conduit sections and in telescoping relationship with each other for adjusting the overall length of the sections (Ibid., abstract and claims 1-11);

a pillar (see Exhibit II) extending into the adjustment components 14 and 21, 6 and having a bore therethrough for receiving the core element; and

a coil spring 20 interacting between the members 14 and 21, 6 to bias the members 14 and 21, 6 together to inherently shorten the overall length of the conduit sections.

Note that although Adams does not show the shortening of the overall length of the conduit sections in the same manner as the applicant, however, when the length of the cable of Adams is releasably fixed, the overall length of the conduit sections of Adams is inherently shortened because the biasing force of the spring 20 eliminates the slacks in the conduit sections. Applicant's claim is anticipated by Adams under the principle of inherency. It is well settled that the functional limitations of a claim may not be given patentable weight where those limitations are inherent in a prior art reference. *In re Schreiber*, *supra*.

Regarding claim 38, see a female member 21, 6 and a male member 14 slidably disposed in the female member 21, 6 including complementary keyways 23 and 13 (Figs. 1, 6 and 7) for rotary orientation of the male member 14 relative to the female member 21, 6.

Regarding claim 39, the male member 14 presents an internal limit surface 16 for engaging an inner end of the pillar to limit the insertion of the male member into the female member as seen in the Exhibit II.

Regarding claim 40, see a female member 21, 6 and a male member 14 slidably disposed in the female member 21, 6, the pillar being slidably disposed in the male member 14 (at 16 in Fig. 1).

Regarding claims 20 and 28, see regarding claims 37 and 38 above.

15. Claims 6-16, 22 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

17. Applicant's arguments filed September 20, 1999 (Paper No. 12) and November 26, 1999 (Paper No. 14) have been fully considered but they are not persuasive.

PAPER No. 12

DRAWINGS

Applicant averred in Paper No. 12 that no overall length of the first and second conduit sections is claimed; rather, the spring biasing the components together to shorten the overall length of the conduit sections is claimed and is sufficiently shown in Fig. 3.

The examiner respectfully submits that these arguments are unsupported by the limitations appearing in the claims. Indeed, applicant claims call for the shortening of the overall length of the conduit sections caused by the spring. Therefore, under 37 C.F.R. 1.83, this feature must be shown or canceled from the claims. Moreover, Fig. 3 merely shows the spring 22 and a portion of the conduits 14 and 16. It is unclear to the examiner as to why the overall length of the conduit sections is shortened based on Fig. 3 when Fig. 3 fails to show the overall length. Similarly, claim 15 specifically calls for the shortest overall length of the conduit. None of the figures show this feature. The objections to the drawings are, therefore, maintained.

INFORMATION DISCLOSURE STATEMENT

Applicant submitted the abstract of EP 517583. The examiner believes that this abstract represents the concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of EP 517583. The examiner has considered this reference.

DECLARATION

The signed declaration has been approved.

ART REJECTION

TEICHERT

Applicant contended that the examiner called the fitting **54** of Teichert "a conduit" section. The examiner respectfully submits that applicant apparently misconceived the examiner's Office action. The examiner called the elements 36 and **58** as conduit sections.

Applicant's Modified Exhibit likewise missed the point because the examiner did not call the fitting 54 as the conduit section as applicant alleged. As plainly seen in the Exhibit attached, the conduit sections 36 and 58 are shortened as fully explained in the Office action on August 16, 1999.

For the reasons stated above, this rejection is maintained.

GLOVER

Applicant argued, *inter alia*, that the conduit sections 7 and 9 are not interconnected, e.g., Figs. 3 and 4 of Glover show that the section 9 is movable.

Contrary to applicant's remarks, conduit sections 7 and 9 of Glover are interconnected in the same manner as applicant's conduit sections 14 and 16 shown in applicant's Fig. 1. Moreover, applicant's contention that the overall length of the conduits sections 7 and 9 is lengthened is in direct conflict with the evidence presented in the record. Indeed, Fig. 3 of Glover shows that as the spring 35 is expanded axially, the components 5 and 20 are biased together to shorten the length of the first conduit 7, consequently, the overall length of the first and second conduit sections 7 and 9 are shortened as explicitly described in 13-33 of column 4. It is well settled that the functional limitations of a claim may not be given patentable weight where those limitations are inherent in a prior art reference. *In re Schreiber, supra.*

On the other hand, applicant explicitly admitted on page 1 of Paper No. 12 that applicant does not claim the overall length of the first and second conduit sections. Therefore, the tandem arguments about the overall length of the first and second conduit sections are not accorded patentable weight since they are not based on the limitations appearing in the claims based on applicant's own admission. *In re Self*, 213 U.S.P.Q. 1, 5 (CCPA 1982).

For the reasons stated above, this rejection is maintained.

PAPER No. 14

Applicant describes the teachings of U.S. Patent No. 4,753,123 and EPO No. 0312282B1. However, these references are not used in the rejections. Moreover, new claims 20-29 and 37-40 necessitated new grounds of rejections above. In addition, the method claims 30-36 are withdrawn since applicant elected the apparatus as seen by original claims in the instant application.

18. Applicant's arguments with respect to claims 4-40 have been considered but are moot in view of the new ground(s) of rejection.

19. Applicant's amendment such as the cancelation of claims 1-3 and new claims 20-40 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 305-7687**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicants are paying by check **should not be** submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P. 512). The following is an example of the format the certification might take:

> I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-7687) on _____
> (Date)
>
> Typed or printed name of person signing this certificate:
> _____
>
> _____
> (Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Luong whose telephone number is (703) 308-3221. The examiner can normally be reached on Monday-Thursday from 7:30 AM EST to 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. The fax phone number for this Group is (703) 305-7687. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Luong

December 20, 1999

Vinh T. Luong
Primary Examiner

FIG. 4

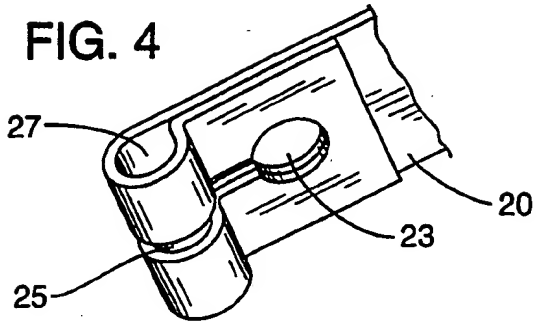


FIG. 2A

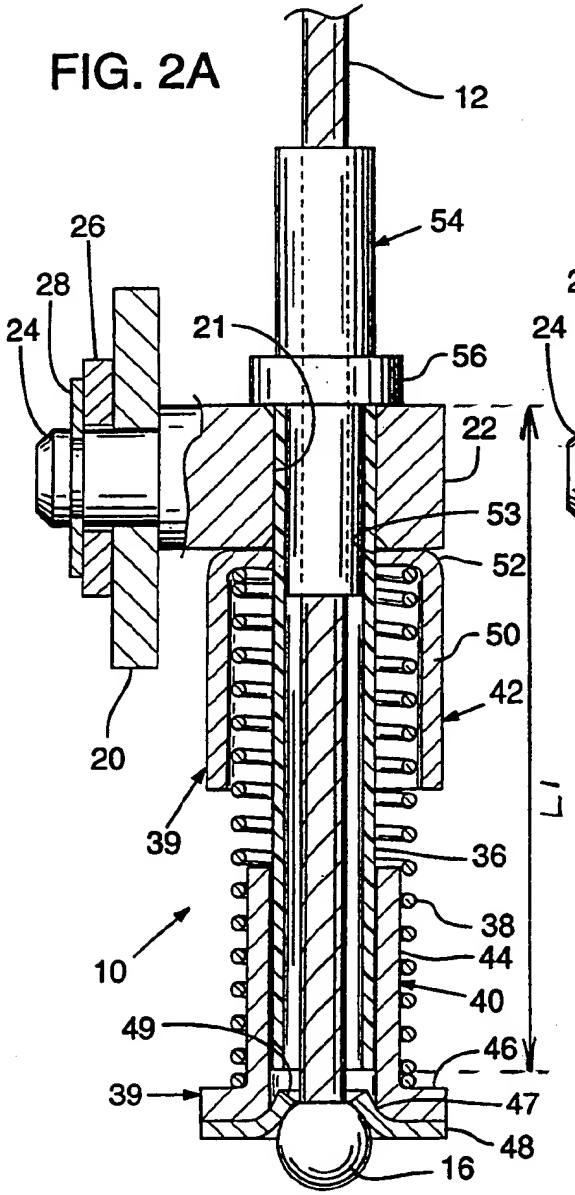
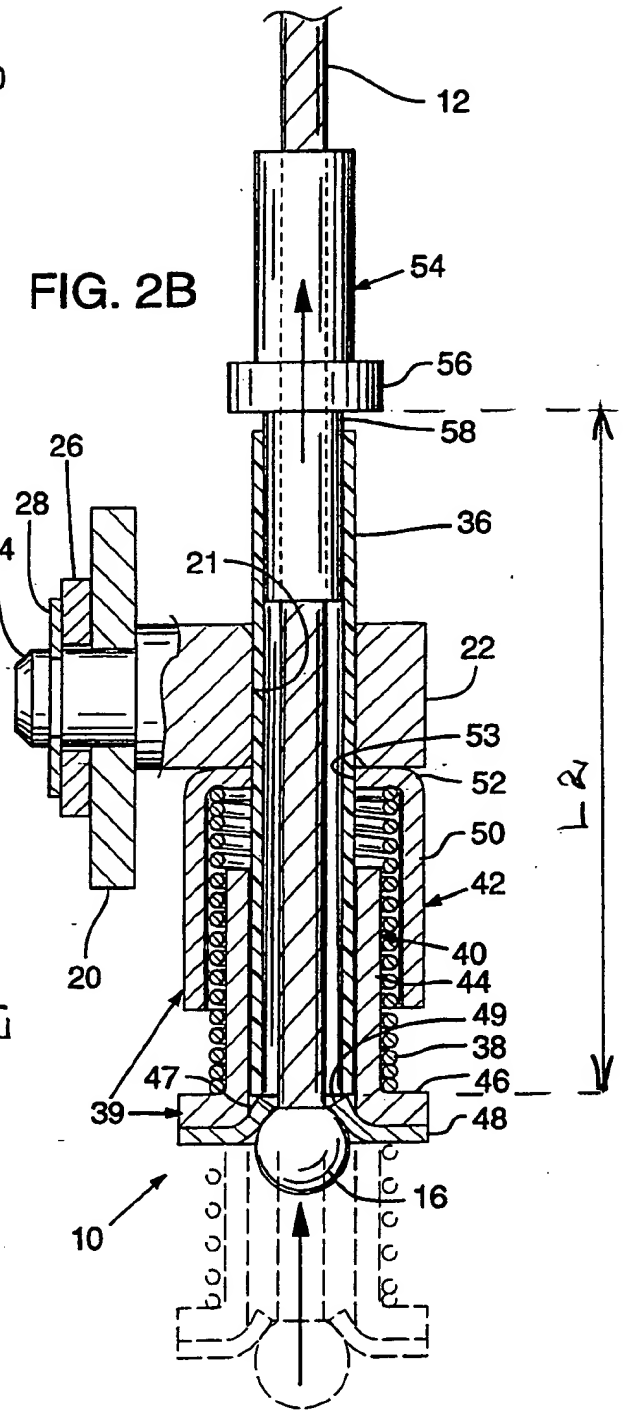


FIG. 2B



NOTE THAT L1 IS SHORTER THAN L2 AS MEASURED BY A RULER

EXHIBIT - I

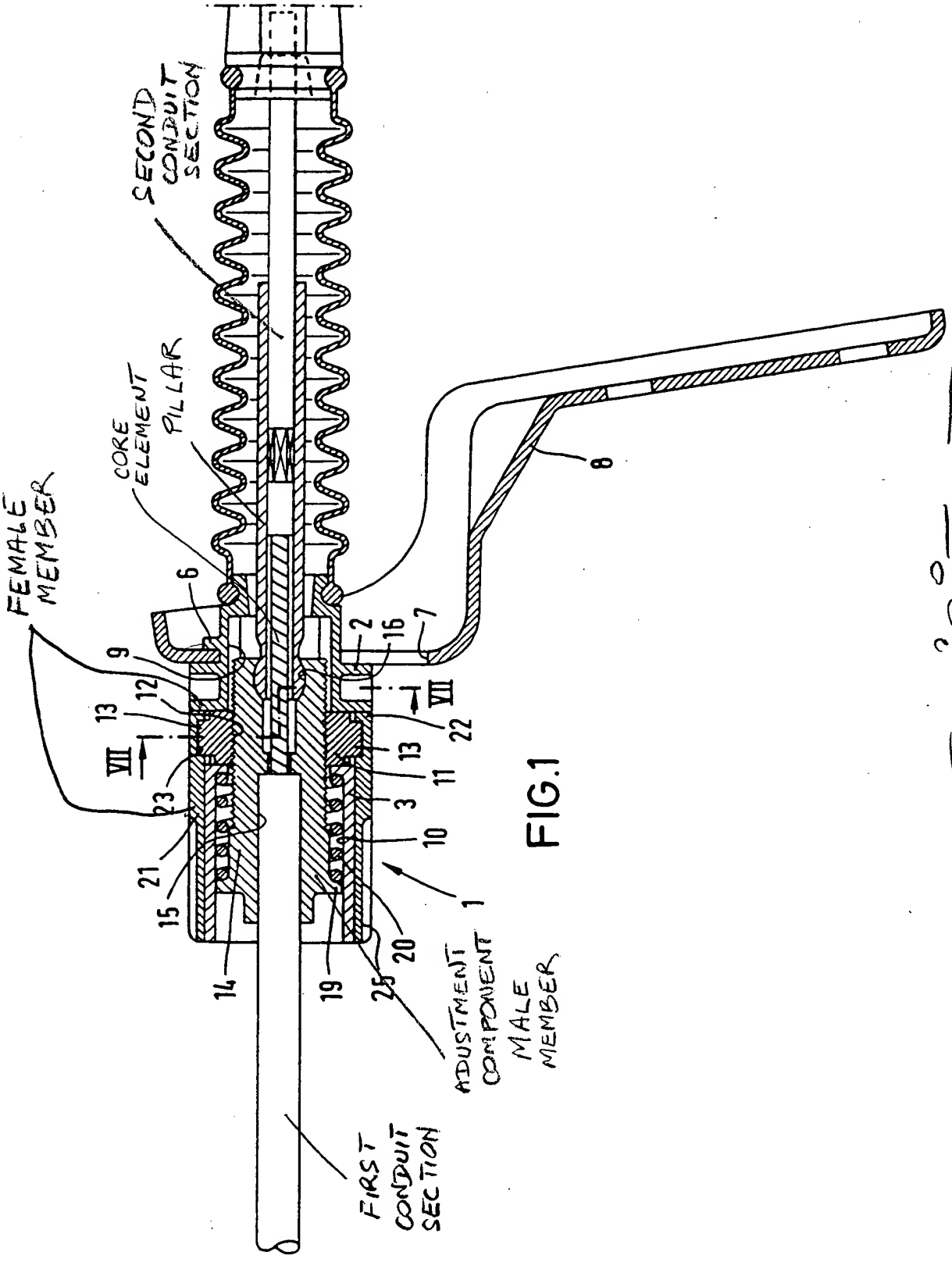


FIG.1

EXHIBIT - II